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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,225	12/26/2001	John K. Hewitt	N8097	9361

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EXAMINER
PREVIL, DANIEL

ART UNIT	PAPER NUMBER
2632	

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/027,225	HEWITT ET AL.	
	Examiner	Art Unit	
	Daniel Previl	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 December 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "ionization switch" in lines 4-5 is unclear whether the Applicant refers to "water ionization switch" in line 4 or to another "ionization switch".

Claims 2-8 are rejected for the same reason since they depend from a rejected claim.

Claim 9 recites the limitation "the amount of electrolyte" in line 8, there is insufficient antecedent basis for this limitation in the claim.

Claims 10-16 are rejected for the same reason since they depend from a rejected claim.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

I. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Max R. Uhlig (US 3,200,388) in view of Brown (US 3,770,002).

Regarding claim 1, Max. R. Uhlig discloses a power supply (transformer 21) for generating an electrical signal (fig. 2; col. 3, lines 1-20); a water ionization switch (substance 15) connected to the power supply (transformer 21), wherein the switch conducts the electrical signal when exposed to water (substance 15 is a water deformable spacer that dissolve rapidly in water to form a conductive electrolyte) (fig. 2; col. 2, lines 27-31); the ionization switch (substance 15) including dry non-conductive crystallized compound, wherein the compound ionizes to form an electrolyte when combined with water (the electrodes 12 and 13 comprise space electrodes, when the substance 15 impregnated with common sodium chloride salt offers a high impedance which degenerates into a low impedance when wetted) (col. 2, lines 27-38).

Max R.Uhlig discloses every feature of the claimed invention but fails to explicitly disclose a controlled valve assembly that stops the flow of water in response to a change in the electrical signal.

However, Brown teaches a controlled valve assembly that stops the flow of water in response to a change in the electrical signal (fig. 1; abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Brown in Max R. Uhlig. Doing so would enable the system of shutting-off efficiently the system for such appliances in order to eliminate the hazard of flooding.

Regarding claim 2, the above combination teaches all the limitations in claim 1 and Brown further teaches wherein the electrical signal utilizes a voltage of less than 12 volts (low voltage) as a safety feature for reducing electrical shock hazards (for safety) (col. 3, lines 27-28). Same motivation as claim 1.

Regarding claim 3, Max R. Uhlig discloses the power supply including a main power supply and a backup battery (115 volt ac household receptacle) which allows operation of the system during periods of inadequate power from the main power supply (fig. 2; col. 2, lines 39-64).

Regarding claim 4, Max R. Uhlig discloses a container with openings to allow for water entry; first and second electrodes located within the container and separated by the compound (fig. 1-fig. 2; col. 2, lines 8-27).

Regarding claim 5, the above combination teaches all the limitations in claim 1 and Brown further teaches a controlled valve assembly including: an electric relay connected to the sensor; a valve actuator connected to the relay; a reset switch connected between the sensor and the relay (fig. 2; col. 2, lines 8-55). Same motivation as above.

II. Claims 6-8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Max R. Uhlig in view of Brown and further in view of Garth.

Regarding claim 6, the above combination teaches all the limitations in claim 1 but fails to explicitly disclose a reset button connected to switch.

However, Garth discloses a reset button connected to switch (fig. 2, ref. 23).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention made to incorporate the teaching of Garth in Max R. Uhlig and Brown. Doing so would enable the system of fixing accurately the water leak by pressing a reset button.

Regarding claim 7, the above combination teaches all the limitations in claim 1 and Garth further discloses a condition indicator operatively connected to switch and power supply for indicating the operation of valve assembly (fig. 1; col. 2, lines 9-28).

Regarding claim 8, the Examiner takes the official notice that a light source is well known in the art.

8. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Max R. Uhlig (US 3,200,388).

Regarding claims 9, Uhlig discloses a water ionization switch for detecting the presence of water (fig. 2; col. 2, lines 1-12) comprising: a container 10 with an interior (fig. 1); a first electrode 12 contained within the interior (fig. 1, ref. 12); a second electrode 13 spaced from the first electrode such that the electrodes do not make direct electrical contact (fig. 1); and an electrolyte contained within interior and constrained only by the container, the amount of electrolyte and volume of the interior proportionally

related (accumulation of water) (col. 3, lines 1-45) such that the introduction of water into the interior of the container results in the formation of a conducting aqueous solution between the electrodes (fig. 2, ref. 12-13, col. 2, lines 11-49).

Although, Max R. Uhlig discloses every feature of the claimed invention but fails to specify that the container including at least one cover defining openings allowing water penetration of the interior of the container. Since Uhlig discloses clearly a cover to allow a water entry and accumulation of water in the receptacle 11. It would have been obvious to any skill artisan at the time the invention was made to recognize that the cover must have a plurality of openings to permit water penetration in which appropriate actions could immediately be taken to stop water flooding.

Regarding claim 10, Max R, Uhlig discloses a water ionization switch the container including a two-inch diameter housing manufactured from a non-conductive material (fig. 2; col. 2, lines 28-38).

Regarding claim 11, Max R. Uhlig teaches a container shaped in a configuration selected from a configuration group including square, rectangular (fig. 1).

Regarding claim 12, Max R. Uhlig teaches a woven material mesh to allow for water entry. (machine 10 has a cover) (fig. 1).

Regarding claim 13, Max R. Uhlig discloses the electrodes 12, 13, mounted through a side of the container (fig. 1)

Regarding claim 14, the above combination fails to explicitly mention 40% of the mass of the element to form the conduction solution. It is an obvious design choice to use approximately 40% of the mass of the electrolyte to form the conductive solution. Any skill artisan at the time the invention was made would have recognized the desirability of using any amount of the mass of the element to form the conductive solution to detect water leak into the container.

Regarding claim 15, Max R. Uhlig teaches the electrolyte is non-conductive while dry (col. 2, lines 27-38).

Regarding claim 16, Max R. Uhlig teaches sodium chloride (col. 2, line 35).

Conclusion

III. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jarvis et al. (US 4,591,838) discloses an spillage detector for liquid chromatography systems.

Hanson (US 4,888,455) discloses a water leak detector and method therefore.

Welch, Jr. et al. (US 5,357,241) discloses a fail-safe leak detector.

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to D. Previl whose telephone number is (703) 305-1028. The examiner can normally be reached on Monday through Thursday from 8:30 A.M. to 4:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel WU can be reached on (703) 308 6730. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6743.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

D. Previl
February 20, 2003

DANIEL J. WU
PRIMARY EXAMINER
2/22/03